

Public Transportation Crisis in Bandar Lampung

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Abstract—*Increasing the number of private vehicles are not comparable with the growth of public transport vehicles. Though the population of the city has increased rapidly, followed by increasing the amount of movement of people from one place to another. This growing movement should be facilitated by public transport so that traffic is not crowded by private vehicle. Because with more and more use of private vehicles will have an impact on the wasteful use of fuel for motor vehicles, traffic congestion led to wastage of time and cost, as well as environmental pollution. Therefore, the development of public transport in urban areas should be done as soon as possible to address the addition of the urban population, increasing the number of movements of people to move from one place to another, and the increase in the number of private vehicles.*

Keywords: Crisis, public transportation, Bandar Lampung.

I. INTRODUCTION

The development of public transportation in Bandar Lampung is very slowly if we compare that with other cities in the world. This happens because the orientation of urban transportation development had not been clear until the last 2010. The tendency of big cities in South East Asia, who experienced population growth so fast, make the citizen mobility increases, and if the public transportation does not facilitate their mobility, they will be using private vehicle (e.g. motorcycle and car) [1]. A long distance among of housing and economic zone, make the movement of citizen so many. If there is not the mass public transportation, the public will be using private vehicle to facilitate their mobility/movement.

Bandar Lampung City has a complicated problem on cities transportation because there is considerable distance between of location of housing, settlement, and economic

zone. So, a long distances between of the location, that is not make citizen walk or using bicycle from one location to another, so required an extraordinary policy to repair city transportation.

In this situation, Bandar Lampung also has problem with the decreasing of public transportation number. In this city, until 2013, there had been two kinds of public transportation; those are BRT and Microlet. Both of them were having problem with the quantity and management, so it made the public transportation services so limited. The city government is still trying to seeking to repair public transportation even though the challenge is not easy. The existing data on Department of Transportation of Bandar Lampung until 10 Mei 2013 said that the number of BRT currently whom operation was 75 units and Microlet was about 1000 units [2].

There are many polemics in that process but the step of change could not be stopped. If we late to make policy and implementation the conduct, will make the provision of public transportation become more difficult. We can take an example on Jakarta, when a city has afraid to realize their public transportation because there is protest from the citizen, on so much things, in the future cost to realize public transportation more highly than now. Such as discomfort of the old public transportation that the existence is disrupted by the new one, high cost to implement BRT concept, and the potential of problem in operation process, it that contributed in increasingly problem in traffic. Bandar Lampung has to be brave to take policies and to enforce of rules, to prevent Bandar Lampung have problem like a Jakarta city.

However, development of public transportation has to be held as soon as possible in order to satisfy the town needs at this time and the future. Macro public transportation concept must have been executed even from the smallest thing to compare to the current demand. But after that the macro concept has to be full

development to balancing among of demand and supply. As we can see, when the mobility is not facilitated by the public transportation, the mobility will be taken by private vehicle like a car or even motor cycle.

What about pedestrians? From the quantity, the number of pedestrians is not so much. The tendency of pedestrian is not more than 300 meters. If the destination is more than 300 meters so that they tendency to use motor vehicle. Non motorize transportation (NMT) like a bicycle, in Indonesia it is still not a common culture. Tendency of bicycling is only on some moments, not for regular transport. Even a tendency, use the bicycle is only following trend. Plus, traffic conditions and street facilities which is not supporting or even calling mass desires to use bicycle (non-motorized transportation) [3].

So, public transportation development should become government attention, especially for Bandar Lampung City Government. The volume of vehicles exceeding the capacity of the road, and that condition give us an indication about the high citizen mobility. Trip generation and trip distribution spread at many points with medium and far distance. So they need facilities to move from one place to another place with proviso the fast, cheap, comfort and save.

The citizen has tendency is using motor cycle. To proof that the number of motor cycle users is more than car users and public transportation is simple, when the heavy rain comes, the road became deserted, the passing vehicle only private vehicle and public transportation. This is the simple way to prove our statement. To know the compositions of the vehicles whom that pass on current roads is by using traffic volume survey. So the number of vehicles will be recorded properly and the result can be responsibility.

II. POPULATION AND LAND USE

Bandar Lampung population continues to increase. The official data launched by Bandar Lampung department statistical town indicates that population number in 2012 as many as 902.447. This quantity increases 1 percent according to population number in the previous year (2011) [4].

This growth below the National growth that reached 1, 5 percent per year, which causes the government be charged to reactivate Planned Family program in order to press that rapid growth rate. This needs to be addressed to the government because the uncontrolled population will be causing an environmental problem, clothing needs and uncontrolled food and shelter. Moreover in 2030 it has been estimated that almost 50 percent of the population will take cities location [4].

TABLE 1. POPULATION IN BANDAR LAMPUNG (2008-2012).

Years	Population
2008	822.880
2009	833.517
2010	879.651
2011	891.022
2012	902.477

Source: BPS Bandar Lampung 2013 [1]

BPS Bandar Lampung report the number of population which has been estimated is smaller than the existing population. From the city government data, population number of Bandar Lampung until 2013 has reached 1,3 million.

The different data from BPS Bandar Lampung and The City Government is not our main focus. But from parking condition in the center of city, we can see amount of vehicle continues to increase. We can also be seen from how parking lots on the economic area, office area, mall and education area, very crowded. And it make LOS (level of service) all of street in this city, has decreased. Capacity expansion of road has done. But the number of vehicles that are always approaching the capacity of the road makes the road is always in danger of congestion.

This indicates of city transportation problem is not just caused by the increasing of population number, it is also caused by the increase of vehicle user, unavailability of public transportation, and there are commuter from outside town to the inside. This commuter normally located on the edge of town or even located on the outside of city administration (such as South Lampung regency, Pesawaran and Pringsewu) but they have activity inside the city. In the morning they go to the city and in the evening they left the town, to go back to their home located in surrounding of Bandar Lampung city. This is seen from how the traffic flow on ZA PagarAlam Street and Imam Bonjol Street becomes crowded in the morning and evening.

Distribution system of land use in Bandar Lampung also contributes to transportation problem. Location of economic activity which is placed away from the housing has led to high needs of citizen mobilities from one to another place. The housing that is in Kemiling, Langkapura, Rajabasa, Way Kandis, Way Halim and Sukabumi. While, location of economic activity placed on other locations, is in Panjang, Teluk Betung, Tanjung Karang, Kedaton, and Labuhan Ratu. Differences of location or there are distances between the housing and location of economic activity has high contribution on high mobility of citizen [5].

But this happens as a logical consequence of development and cities growth. Land utilization control was really difficult to realize because the government assumes that they have limitation in controlling land utility because the owners of the land was private. Regulation of Urban Design is owned by Bandar Lampung in 2004 through District Regulation No. 4 Year 2004 it's about RTRW in Bandar Lampung City. Before, land use permit not based on the previous land use regulations, but compromise. This condition, make owner of land can build anything on their land, according to the current trend and market demand [6].

Central economic activity deployment and settlements also have a tendency in the cities in the developing countries. Horizontally a construction settlement is a placing culture which is owned and adopted by mass. Settled vertically have not became a trend yet even for flat constructions was in this previous years and have been a part of national program to build 1000 twin block of flats throughout Indonesia in order to satisfy the increasingly needs of settlements, but the handy house was limited and due to high costs of land.

TABLE 2.TREND OF LAND USE IN BANDAR LAMPUNG

Trend of land use existing	District
settlement activities	Kemiling, Langkapura, Way Kandis, Way Halim, Sukabumi, danRajabasa
Economic and education activities	Panjang, TelukBetung, Tanjungkarang, Kedaton, danLabuhanRatu

Source: Observation and RTRW Report in Bandar lampung, 2011

Option which is allowed is building flats so that a single field land with certain board can accommodate many houses with vertically design though it is not culture of settlement. The mass still chose to stay in the edge of town, to take the cheap cost of lands. High cost of mobility temporarily is immeasurable because there is option of using motor cycle. The existing public transportation was not worthy enough to reach all city regions so that the using of motor cycle is a realistic optional at this time, for mass that settled in the edge of town.

The consequences is the community save will be treated, the lower healthy and fuel improvident. This is really lowering mass income, but that will not become a reason to stay in the edge of town. That problem is considered as a life challenges. In the end, the

government must repair public transportation as soon as possible so that mass mobility that settled in the edge of town can be served by public transportation cheaply, save and comfortable include with it fast. These things must be implemented so as not to be a complicated problem due to mass existing tendency to use personal vehicle because of the existing conditions.

III. PUBLIC TRANSPORTATION TREND

Public transportation in Bandar Lampung is in repairing process. Developing system of mass public transportation with increasing bus rapid transportation (BRT) in seven corridors is in repairing status. They have operated before and been given acceptance from mass. Because of there are some problems with money management in the concern of investor in this case is PT. Trans Bandar Lampung (PT TBL), finally today there are only 4 active corridors. It was not supported by sufficient BRT armada. Before PT TBL and their partner operated almost 180 buses, this time they only have 75 buses that operated. Indeed it becomes more less in arrow with buses pulling by PT TBL creditor [3].

TABLE 3
TYPE AND NUMBER OF PUBLIC TRANSPORTATION

Type	Total Seating Capacity And Vehicles	Description
Microlet	1000 unit 1 unit = 12 seat Total seat = 12.000	1000 units are based on the data from P3ABL which is permit in 2002-2004. Spread over 14 routes and included individual business permit.
Bus BRT	75 unit (Mei 2013) 1 unit = 28 seat, 20 stand Total capacity: 3.600	BRT was developed by PT TBL, whom authorized to operate 250 bus units. Composition of bus share is PT TBL = 210 units, KSO PT TBL = 40 units.

Source: City government Bandar Lampung, 2013

Meanwhile, microlets had been operated in Bandar Lampung, will be placed in the feeder route. But, up to this writing, no one of microlet had operated in the feeder route.

Amount of microbus is 1000 units (P3ABL, 2013), which operates in all the long route of public transport. This amount will be survive until 2014 because there are policy from mayor to give operation permit to microlet until 2014, In accordance with *Perwali* (The Regulation from Mayor of Bandar Lampung) on Public Transport Patterns Bandar Lampung in 1985 which states that period of permit is only valid 10 years. So should all microlets expire permits of its operation in 2012. But the effect from BRT that is not operated yet optimally, so the operating of microlet will be extended to be 12 years, or until next 2014.

Previously, the total number of microbus reached 3800 units. Because there is a limit of permit only for 10 years, so until 2012 the total microlet which is still operation is 1000 units. And 1000 units had additional 2-year permit to operate until BRT can be optimally. That is, in 2014, all of the microlet, should be operate in feeder route.

Both types of existing public transport currently have limitations to facilitate total potential passengers in Bandar Lampung. From the data of Transportation Agency (*Organda*) seat occupancy only 50 percent than capacity for microlets and 60 percent to BRT. This shows, million movement in Bandar Lampung, is not served by public transport.

We can make estimates. If there are 900.000 populations in the city, and 70% of them traveled at least 2 times per days (go and back), then there will be 1.260.000 trips per days within the city. If we add commuter transportation (from Pringsewu, Pesawaran, Natar and Metro, etc), are amount will be greater. That is means, there are millions of trips per day that should be served by public transport. But unfortunately, the number of trips which served by public transport is very low. The combined total of passengers between BRT and microbus are very small if compared to the total trips in the Bandar Lampung.

Travelling division according to kind of vehicle (moda share) in Bandar Lampung is placing the motor cycle users and private car in high position. So it is not surprising if the traffic condition from time to time is increasingly dense by the motor cycle, it led to traffic jam in many points and becomes persistent and caused improvident on time and cost. This thing demanded the government to solve this problem as the effort to press the endless problem that always shows up. The more strategic effort is developing powerful public transportation, providing the best facilitation for pedestrian and bicycle user, enacting the policies including that complicated private vehicle such as vehicle tax which is

high, progressive tax parking and implanting road pricing etc.

TABLE 4
TRAVEL AND MODA SHARE

MODA	MODA SHARE
BRT	2,56
Microlet	8,53
Private vehicle	26,67
Motor cycle	62,23

Source: Analytic Results, 2013

Bandar Lampung only has two kinds of public transportation this time, such as BRT and mini bus. BRT is in developing process and need long enough time to take the role in concept ideally as public transportation. Mini bus temporarily operates until 2014 apparently like the older one. Mini bus also estimate is not operating on feeder lane yet because the potentially comprehension will be formed is not exist. The exception if BRT is going as plan in near future, so can be feeder lane will operate even though the microbus doesn't pass on it

However the new vehicle license granted to business entities, as mandated by Law No. 22 Year 2009 on Traffic and Road Transportation [7]. This is in order to build the urban public transport system. While not perfect, the development of public transport is very urgent realized starting from now.

IV. THE CHALLENGES OF PROBLEMS SOLVING

An effort to increase the number of passenger of public transport, steps to be taken:

1. Build a good public transport system
 - a. Build a mass transit-such as Bus Rapid Transportation (BRT), as well as rail / LRT and MRT. Public transport is operated on the main line, because has the ability to carry passengers in large quantities. The city of Bandar Lampung has developed BRT, although must continue to be refined. If the population has increased, and mobility has increased too, mayor should be build others mass transportation, such as monorail or subway.
 - b. Build of feeder transportation. Kind of feeder transport is microlet, which is a connector from the residential areas to the main line. The existence of the feeder is very important to connectivity of residential areas or economic activity zones. In the future, types

- of feeder vehicle can be changed according to the necessary.
- c. Build a special line for non-motorized transportation/NMT on the same track with motor vehicles lanes to encourage citizen to using NMT vehicle.
 - d. Build pedestrian facilities. Pedestrian facilities are often overlooked. In many cities, pedestrian facilities used by traders (PKL), parking, and motorcycles to avoid traffic jams on the road. Therefore, provider of special facilities for pedestrians are equipped with street furniture, should be performed to make people feel comfortable when walking. Pedestrian should be one of the main programs of mayor and city government to support development of good urban public transport and in order to create an urban transportation system which is environmentally friendly and sustainable.
2. Controlling the ownership and use of private vehicles
- a. Applying high taxes to buyer a private vehicle. Currently, tax of private vehicle, is still very low. The old car has cheap tax, because the components of the calculation of the tax base is the price of the vehicle. Finally, many people buy the used vehicle because the price is cheap and tax is low. So, government should be apply the system high tax to all of vehicle, all of the age of vehicle to make citizen leaving of use private vehicle and move to using public transportation or NMT vehicle or walking on the pedestrian street. To apply of this concept, government should be provided good public transport.
 - b. Restrictions on ownership of private vehicles. As stated above, the high tax to private vehicle is expected to reduce interest of the public to buy and use private vehicles. This restriction may be such as a requirement of ownership or purchase sufficient detailed and complicated. There should be a guarantee from the office to provide parking zone, neighbors permit, etc. The main purpose is describing that to buy and use personal vehicle is very difficult.
 - c. High taxes for parking. The imposition high taxes for parking can also be an instrument to reduce the use of private vehicles. This policy is applied to reduce parking in the city center and of economic activity center, because that zone should be met by the people, not the vehicle. So that people can freely doing activities / transactions in the zone. So, to facilitate demand of parking in that zone, government should be parking spaces (building or land).
 - d. The application of road pricing. The application of road pricing is done to reduce the volume of traffic in many streets to suppress the use of private vehicles.
 - e. Tightening of driving license (SIM). Currently, to have SIM, should be aged 18 years. That is means, to have SIM enough to have aged 18 years. There should be a prerequisite of the exam is strictly. Someone can haven't SIM before following test in police office. Today, many are able to get SIM without test in police office.
- Be required a lot of effort to build a good transportation in Bandar Lampung through the development public transport. To push the public to use public transportation to facilitate their mobility, it is needed to push and full factor to build a new culture of transportation in the city.

V. CHALLENGES IN ANY EFFORT TO BUILD PUBLIC TRANSPORTATION

The challenge to build public transport in developing countries, especially in Bandar Lampung are:

1. Low commitment
Required of commitment from the Mayor, legislature and government officials to build a good urban transportation. If the commitment is low, it makes efforts to be complicated to build a good public transportation.
2. Regulations unsupported
Regulation (i.e. *perda* or *perwali*) still has not specifically mention about government obligation to build mass transportation system. Current regulation is still tend to increase income to government. For example; regulation about parking and public transportation permit. Both of regulation are tended to regional income. That is not about management of parking and mass transportation management. Because, there is not mention explicitly about government obligation to provide parking space.
3. Public transport planning is not detailed
Mass transportation planning should be made as detailed as possible so the government can build that in accordance with the direction of design. The current concept still macro planning so needed next steps to detailing urban transportation planning, such as planning about corridor of mass transport, bus stops, park and ride locations and models, pedestrian corridor, and so on.
4. Inadequate of human resources

HR issues it has become a Mayor issue of government officers. So, HR should be following education and training, to raise their knowledge and commitment to public serve. Skill in transportation should be raised with special education in transportation policy, transportation planning, transportation design, and etc.

5. Budget constraints

Budget constraint issues are often the reason given by government to build good public transportation. But do not forget, Transportation Minister have budget to help many cities in Indonesia to solve problem in transportation. Government of city can ask for help to Transportation Minister. The others way, government of city can do gradual development with city government budget. Also, Government can formulate the investmentrole in public transportation in the city. Joint investment among of private and public (government) can be others solution to faster process to build mass transportation in the city. The concept, public and private partnership is a new manner to trigger process development more than faster.

There are many challenges to build a mass transportation system in Bandar Lampung. But all of problem needs to solve. Government needs support from public and mass media. Because the issue of public transportation development is a sensitive issue.

VI. CONCLUSION

To solve the problem about Public transportation Crisis in Bandar Lampung City, the government should be have commitment to encourage the growth and the development of public transportation. The government also must have a commitment to reduce the tendency of society to own and use of private vehicles. Without a strong commitment to conduct orders of regulation and planning in urban transport reform, Bandar Lampung will not be able to create a good transportation system. Meanwhile, urban transport sector is required to develop to become a modern city.

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